WASHINGTON DEPARTMENT OF ECOLOGY

ENVIRONMENTAL ASSESSMENT PROGRAM

FRESHWATER MONITORING UNIT

STREAM DISCHARGE TECHNICAL NOTES

STATION ID: 35M100

STATION NAME: Deadman Creek near Gould City

WATER YEAR: 2010

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Introduction

Watershed Description

Deadman Creek is a left-bank tributary to the Snake River, opposite Central Ferry State Park. The creek drains the fertile agricultural highlands flanking the southern breaks of the Snake River in its northernmost bend into Washington State.

Gage Location

The station is located on the right side of the stream at the Deadman Creek road bridge, approximately 2.0 miles downstream from the confluence of the north and south forks of Deadman Creek.

Table 1. Basin Area and Legal Description

Drainage Area (square miles)	77 (USGS)
Latitude (degrees, minutes, seconds)	46° 36' 0" N
Longitude (degrees, minutes, seconds)	117° 36' 0" W

Table 2. Discharge Statistics.

Mean Annual Discharge (cfs)	4.2
Median Annual Discharge (cfs)	4.1
Maximum Daily Mean Discharge (cfs)	12
Minimum Daily Mean Discharge (cfs)	1.3
Maximum Instantaneous Discharge (cfs)	15
Minimum Instantaneous Discharge (cfs)	1.0
Discharge Equaled or Exceeded 10 % of Recorded Time (cfs)	6.0
Discharge Equaled or Exceeded 90 % of Recorded Time (cfs)	1.8
Number of Days Discharge is Greater Than Range of Ratings	18
Number of Days Discharge is Less Than Range of Ratings	0
Number of Un-Reported Days	18
Number of Days Qualified as Estimates	56
Number of Modeled Days	0

Note: Statistics displayed in Table 2 may not include values in which the predicted discharge exceeds the range of ratings.

Table 2 Discussion (Discharge Statistics)

The unreported days are due to rating curve exceedances. Five discharge measurements were taken throughout the water year, ranging from 2.4 to 6.0 cfs.

Table 3. Error Analysis Summary.

Potential Logger Drift Error (% of discharge)	5.9
Potential Weighted Rating Error (% of discharge)	11.6
Total Potential Error (% of discharge)	17.5

Table 3 Discussion (Error Analysis)

Potential logger drift error exists when there is a difference between logger and primary gage index (PGI) readings. The PGI at this site is a staff gage.

Table 4. Stage Record Summary

Minimum Recorded Stage (feet)	4.65
Maximum Recorded Stage (feet)	9.58
Range of Recorded Stage (feet)	4.93

Table 4 Discussion (Stage Record)

The slant pipe was damaged during a high flow event in early January, 2010. The data collected during the period after the damage until the middle of February, when the pipe was repaired, were deemed unreliable. These data were removed and replaced with regressed data from Ecology stream gage 35M060 (Deadman Creek near Mouth).

Table 5. Rating Table Summary

Rating Table No.	10	11	12
Period of Ratings	10/1/09 to 1/5/10	1/1/10 to 9/30/10	8/30/10 to 9/30/10
Range of Ratings (cfs)	1.3 to 25	0.20 to 12	0.14 to 8.7
No. of Defining Measurements	9	8	11
Rating Error (%)	10.2	12.0	12.6

Rating Table No.			
Period of Ratings			
Range of Ratings (cfs)			
No. of Defining Measurements			
Rating Error (%)			

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Period of Ratings			
Range of Ratings (cfs)			
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Rating Error (%)			

Table 5 Discussion (Rating Tables)

A significant rain on snow event occurred in early Janaury, 2010. In the fall, this site is susceptible to leaf litter accumulation on the section control.

Table 6. Model Summary

Model Type (Slope conveyance, other, none)	n/a
Range of Modeled Stage (feet)	n/a
Range of Modeled Discharge (cfs)	n/a
Valid Period for Model	n/a
Model Confidence	n/a

Table 6 Discussion (Modeled Data)

Table 7. Survey Type and Date (station, cross section, longitudinal)

Type	Date
n/a	n/a

Table 7 Discussion (Surveys)

Activities Completed

Slant pipe was repaired and re-run in the middle of February, 2010.

Appendix